

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A program creating apparatus for creating a research program which performs a research on the basis of a predetermined research content including a plurality of research items at a predetermined point of research by using a mobile terminal device carried with a researcher,

said mobile terminal device including a display unit for displaying a work screen in which a plurality of input interfaces are formed to input an answer to said plurality of research items of said predetermined research content when executing said research program, a position information acquiring unit for acquiring a position information of said device, and a photographing unit for photographing a designated object, comprising:

a screen information storing unit which holds screen information that forms an input screen including a component setting region to accept information as a parameter required to create said research program to form a component for forming a plurality of research item designating regions to display information representing said plurality of research items of said predetermined research content, and a research result input region in which said plurality of input interfaces are formed to input an answer to said plurality of research items, or a component for designating that said position information acquiring unit or said ~~photograph~~-photographing unit of said mobile terminal device is used, said information being input by a user, a component adding operation button group to accept an instruction to add said component of a type selected from a plurality of types of said component by allowing said user to select a type suitable for said research item added to said work screen, said component adding operation button group being used in the case of adding said research item to said work screen, and a producing button to instruct that a source code is produced by using information required to form said components depending on said type which is input by said user operation, said plurality of research item designating regions and said research result input region being displayed on said work screen displayed on said display unit of said mobile terminal device when said mobile terminal device executes said research program, and which produces information to form said input screen in which each of said component setting region is formed to accept information as said parameter required to form said component depending on said selected type, said information being input by said user, every time said component adding operation button group is operated, the

parameter representing a question to be displayed on a display of a predetermined terminal device when the first program is executed;

a providing unit which provides said screen information to a setting apparatus connected through a network;

an accepting unit which accepts the parameter input on the input screen displayed on the basis of said screen information from said setting apparatus through said network, said input screen including a plurality of said component setting regions to input said plurality of parameters for forming said plurality of components suitable for said plurality of research items on said work screen;

a model storing unit which holds a program code for forming said respective components as a plural types of models using said parameter as an argument in association with said type information which specifies said type of said component;

a producing unit which produces a source code of said research program by selecting a plurality of models from said model storing unit for forming respective components corresponding to said type information of said plurality of components to combine said models and setting said parameter in said argument of said model on the basis of respective type information of said plurality of components corresponding to said plurality of research items included in said plurality of parameters accepted by said accepting unit, and upon completion of production of the said source code, which outputs the effect as a source code completion notification;

a compiling unit which compiles said source code of said research program produced by said producing unit to create said research program that can be executed by said mobile terminal device; and

an instructing unit which instructs said compiling unit to compile said source code in response to said source code completion notification which is output from said producing unit.

2. (Previously Presented) The program creating apparatus as set forth in claim 1, further comprising:

a checking unit which checks whether or not the data size of said research program produced by said compiling unit is smaller than a predetermined size to make it possible to

provide said research program to said mobile terminal device when the size of said research program is smaller than a predetermined size.

3. (Previously Presented) The program creating apparatus as set forth in claim 2, further comprising:

a notifying unit which performs notification to urge said setting apparatus to reduce the number of said parameters when the size of said research program is larger than said predetermined size.

4. (Previously Presented) The program creating apparatus as set forth in claim 2, wherein said predetermined size is set for each mobile terminal device which uses said research program.

5. (Previously Presented) The program creating apparatus as set forth in claim 2, further comprising:

a first program storing unit which stores a research program checked by said checking unit; and

a providing unit which provides and distributes said research program stored in said first program storing unit to said mobile terminal device through a network,

wherein said checking unit stores, when the size of said research program created by said compiling unit is smaller than the predetermined size, the research program in said first program storing unit.

6. (Previously Presented) The program creating apparatus as set forth in claim 1, said screen information storing unit holding further screen information to form said input screen including a research item deletion component to accept an operation to delete said component setting region of said research item in order to delete said corresponding research item,

said program creating system further comprises:

a second program storing unit which holds a checking program that causes said setting apparatus to form a limiting unit that allows said setting apparatus to hold a table in which the types of parameters are associated with program sizes, to specify a program size for each

parameter included in each type of parameter accepted by said accepting unit with reference to said table, and to estimate said size of said research program by adding said program sizes,

said limiting unit further allows said setting apparatus to determine that the number of said research items must be reduced when the size of said specified research program is larger than said predetermined size, to determine that the number of said research items must not be reduced when the size of said specified research program is not larger than said predetermined size, and to allow said setting apparatus not to output said accepted parameter such that the data size of said program becomes smaller than said predetermined size when the determination is made that the number of said research items must be reduced, said limiting unit again allows said parameter managing unit to manage information input to said input screen as said parameters, allows said setting apparatus to accept said parameters from said parameter managing unit, and repeats said estimation and said determination,

said limiting unit further allows said setting apparatus to output said accepted parameters when said determination is made that said research items must not be reduced,

wherein said providing unit provides said second program to said setting apparatus together with said screen information.

7.-16. (Canceled).

17. (Currently Amended) A non-transitory computer-readable medium, storing a program creating program for creating a research program which performs a research on the basis of a predetermined research content including a plurality of research items at a predetermined point of research by using a mobile terminal device carried with a researcher,

said mobile terminal device including a display unit for displaying a work screen in which a plurality of input interfaces are formed to input an answer to said plurality of research items of said predetermined research content when executing said research program, a position information acquiring unit for acquiring a position information of said device, and a photographing unit for photographing a designated object, said program creating program being executed by a processor of a computer comprising:

a screen information storing unit which holds screen information that forms an input screen including a component setting region to accept information as a parameter required to create said first research program to form a component for forming a plurality of research item designating regions to display information representing said plurality of research items of said predetermined research content, and a research result input region in which said plurality of input interfaces are formed to input an answer to said plurality of research items, or a component for designating that said position information acquiring unit or said ~~photograph~~photographing unit of said mobile terminal device is used, said information being input by a user, a component adding operation button group to accept an instruction to add said component of a type selected from a plurality of types of said component by allowing said user to select a type suitable for said research item added to said work screen, said component adding operation button group being used in the case of adding said research item to said work screen, and a producing button to instruct that a source code is produced by using information required to form said components depending on said type which is input by said user operation, said plurality of research item designating regions and said research result input region being displayed on said work screen displayed on said display unit of said mobile terminal device when said mobile terminal device executes said research program, and which produces information to form said input screen in which each of said component setting region is formed to accept information as said parameter required to form said component depending on said selected type, said information being input by said user, every time said component adding operation button group is operated, the parameter representing a question to be displayed on a display of a predetermined terminal device when the first program is executed; and

a model storing unit which holds a program code for forming said respective components as a plural types of models using said parameter as an argument in association with said type information which specifies said type of said component,

when said program creating program being executed by said processor, said program creating program causes said computer to realize;

a providing unit which provides said screen information to a setting apparatus connected through a network;

an accepting unit which accepts the parameter input on the input screen displayed on the basis of said screen information from said setting apparatus through said network;

a producing unit which produces a source code of said research program by selecting a plurality of models from said model storing unit for forming respective components corresponding to said type information of said plurality of components to combine said models and setting said parameter in said argument of said model on the basis of respective type information of said plurality of components corresponding to said plurality of research items included in said plurality of parameters accepted by said accepting unit, and upon completion of production of the said source code, which outputs the effect as a source code completion notification;

a compiling unit which compiles said source code of said research program produced by said producing unit to create said research program that can be executed by said mobile terminal device; and

an instructing unit which instructs said compiling unit to compile said source code in response to said source code completion notification which is output from said producing unit.

18. (Currently Amended) A program creating ~~module-unit~~ for creating a research program which performs a research on the basis of a predetermined research content including a plurality of research items at a predetermined point of research by using a mobile terminal device carried with a researcher,

said mobile terminal device including a display unit for displaying a work screen in which a plurality of input interfaces are formed to input an answer to said plurality of research items of said predetermined research content when executing said research program, a position information acquiring unit for acquiring a position information of said device, and a photographing unit for photographing a designated object, said program creating program being executed by a processor of a computer comprising:

a screen information storing unit which holds screen information that forms an input screen ~~including~~ a component setting region to accept information as a parameter required to create said ~~first~~ research program to form a component for forming a plurality of research item designating regions to display information representing said plurality of research items of said predetermined research content, and a research result input region in which said plurality of input interfaces are formed to input an answer to said plurality of research items, or a component for designating that said position information acquiring unit or said ~~photograph-photographing~~ unit

of said mobile terminal device is used, said information being input by a user, a component adding operation button group to accept an instruction to add said component of a type selected from a plurality of types of said component by allowing said user to select a type suitable for said research item added to said work screen, said component adding operation button group being used in the case of adding said research item to said work screen, and a producing button to instruct that a source code is produced by using information required to form said components depending on said type which is input by said user operation, said plurality of research item designating regions and said research result input region being displayed on said work screen displayed on said display unit of said mobile terminal device when said mobile terminal device executes said research program, and which produces information to form said input screen in which each of said component setting region is formed to accept information as said parameter required to form said component depending on said selected type, said information being input by said user, every time said component adding operation button group is operated, the parameter representing a question to be displayed on a display of a predetermined terminal device when the first program is executed; and

a model storing unit which holds a program code for forming said respective components as a plural types of models using said parameter as an argument in association with said type information which specifies said type of said component,

said program creating ~~module-unit~~ causing a computer to realize:

a providing unit which provides said screen information to a setting apparatus connected through a network;

an accepting unit which accepts the parameter input on the input screen displayed on the basis of said screen information from said setting apparatus through said network;

a producing unit which produces a source code of said research program by selecting a plurality of models from said model storing unit for forming respective components corresponding to said type information of said plurality of components to combine said models and setting said parameter in said argument of said model on the basis of respective type information of said plurality of components corresponding to said plurality of research items included in said plurality of parameters accepted by said accepting unit, and upon completion of production of the said source code, which outputs the effect as a source code completion notification;

a compiling unit which compiles said source code of said research program produced by said producing unit to create said research program that can be executed by said mobile terminal device; and

an instructing unit which instructs said compiling unit to compile said source code in response to said source code completion notification which is output from said producing unit.

19.-20. (Canceled)

21. (Currently Amended) The program creating ~~system~~-apparatus as set forth in claim 6, further comprising said setting apparatus,

said setting apparatus including:

an acquiring unit which acquires said screen information from said providing unit through a network;

a display process unit which displays said input screen in which said plurality of component setting regions are formed on said screen display unit to input said plurality of parameters for forming said plurality of components suitable for said plurality of research items on said work screen on the basis of said screen information;

a managing unit manages information which is input by said user operation through said input screen as a plurality of parameters to form said work screen, and which outputs said plurality of parameters required to form said plurality of components and input in said plurality of component setting regions corresponding to said plurality of research items formed in said input screen in association with respective type information which specifies said corresponding type of said plurality of said components when said producing button operation is accepted; and

a transmitting unit which outputs the parameter managed by said managing unit to said accepting unit that creates said program through said network.

22. (Currently Amended) The program creating ~~system~~-apparatus as set forth in claim 21, wherein said acquiring unit of said setting apparatus acquires said checking program from said providing unit through said network and forms said limiting unit,

said transmitting unit of said setting apparatus outputs parameters within the limits imposed by said limiting unit of said setting apparatus to said accepting unit.

23. (Currently Amended) The program creating ~~system-apparatus~~ as set forth in claim 22, wherein said setting apparatus further comprises:

a notifying unit which notifies said display process unit to display a message that urges reduction of the number of said parameters on said display unit when the number of said parameters must be limited.

24. (Currently Amended) The program creating ~~system-apparatus~~ as set forth in claim 22, wherein said managing unit of said setting apparatus groups said parameters of said component for each of said research items into parameter groups each of which is a group including said parameters corresponding one research item to form one page of said work screen, hold said parameter group while being grouped for each of said research items, and outputs said parameter groups grouped for each of said research items to said accepting unit,

said providing unit provides said setting apparatus with said checking program to create said limiting unit on said setting apparatus, said limiting unit determining whether or not the number of said research items must be reduced on the basis of the number of said parameter groups accepted by said managing unit,

25. (Currently Amended) The program creating ~~system-apparatus~~ as set forth in claim 23, wherein said providing unit provide said checking program for said setting apparatus to create said limiting unit on said setting apparatus, said limiting unit compares the number of parameters managed by said managing unit with a predetermined number to determine whether or not the number of said research items must be reduced.

26. (Currently Amended) The program creating ~~system-apparatus~~ as set forth in claim 25, wherein said providing unit provide said checking program for said setting apparatus to create said limiting unit on said setting apparatus, when the number of parameters managed by said managing unit is larger than said predetermined number, said limiting unit determines that the number of said research items must be reduced.

27. (Currently Amended) The program creating ~~system-apparatus~~ as set forth in claim 5,

wherein said providing unit provides said research program for said mobile terminal device in response to a request from said mobile terminal device.

28. (Currently Amended) The program creating ~~system~~-apparatus as set forth in claim 5, wherein said program providing unit authenticates said researcher by using identification information uniquely allocated to said mobile terminal device before providing said research program, and provides said research program for said mobile terminal device when said authentication is passed.

29. (Currently Amended) The program creating ~~system~~-apparatus as set forth in claim 1, wherein said research item designating region of said work screen includes a research content character string representing said research content and an image relevant to said research content in order to notify said researcher of said research content, said input screen information producing unit produces information to form said input screen for allowing said user to specify research content character string and said image to be displayed on said research item designating region of said work screen.

30. (Currently Amended) The program creating ~~system~~-apparatus as set forth in claim 29, wherein said input screen information producing unit produces information to form said input screen including said component setting region for designating an appearance of merchandise, and an image to explain a technical term included in said research content as said image being displayed on said research item designating region of said work screen, said component setting region of said input screen allowing said user to designate said image to be displayed on said work screen.

31. (Currently Amended) The program creating ~~system~~-apparatus as set forth in claim 30, wherein said component to inform said input interface includes a text box to input a text, a radio button with which one answer can be selected from a plurality of options, and a check box with which the arbitrary number of answers can be selected from a plurality of options.

32. (Currently Amended) A non-transitory computer-readable medium, storing a program creating program for creating a research program which performs a research on the basis of a predetermined research content including a plurality of research items at a predetermined point of research by using a mobile terminal device carried with a researcher,

said mobile terminal device including a display unit for displaying a work screen in which a plurality of input interfaces are formed to input an answer to said plurality of research items of said predetermined research content when executing said research program, a position information acquiring unit for acquiring a position information of said device, and a photographing unit for photographing a designated object, said program creating program being executed by a processor of a computer comprising:

a screen information storing unit which holds screen information that forms an input screen including a component setting region to accept information as a parameter required to create said research program to form a component for forming a plurality of research item designating regions to display information representing said plurality of research items of said predetermined research content, and a research result input region in which said plurality of input interfaces are formed to input an answer to said plurality of research items, or a component for designating that said position information acquiring unit or said ~~photograph~~-photographing unit of said mobile terminal device is used, said information being input by a user, a component adding operation button group to accept an instruction to add said component of a type selected from a plurality of types of said component by allowing said user to select a type suitable for said research item added to said work screen, said component adding operation button group being used in the case of adding said research item to said work screen, and a producing button to instruct that a source code is produced by using information required to form said components depending on said type which is input by said user operation, said plurality of research item designating regions and said research result input region being displayed on said work screen displayed on said display unit of said mobile terminal device when said mobile terminal device executes said research program, and which produces information to form said input screen in which each of said component setting region is formed to accept information as said parameter required to form said component depending on said selected type, said information being input by said user, every time said component adding operation button group is operated, the

parameter representing a question to be displayed on a display of a predetermined terminal device when the first program is executed; and

a model storing unit which holds a program code for forming said respective components as a plural types of models using said parameter as an argument in association with said type information which specifies said type of said component,

when said program creating program being executed by said processor, said program creating program causes said computer to realize:

a providing unit which provides said screen information to a setting apparatus connected through a network;

an accepting unit which accepts the parameter input on the input screen displayed on the basis of said screen information from said setting apparatus through said network;

a producing unit which produces a source code of said research program by selecting a plurality of models from said model storing unit for forming respective components corresponding to said type information of said plurality of components to combine said models and setting said parameter in said argument of said model on the basis of respective type information of said plurality of components corresponding to said plurality of research items included in said plurality of parameters accepted by said accepting unit, and upon completion of production of the said source code, which outputs the effect as a source code completion notification;

a compiling unit which compiles said source code of said research program produced by said producing unit to create said research program that can be executed by said mobile terminal device; and

an instructing unit which instructs said compiling unit to compile said source code in response to said source code completion notification which is output from said producing unit, the program further causing a computer for realizing said setting apparatus of the program creating system as set forth in claim 1 to realize:

an acquiring unit which acquires said screen information from said providing unit of said program creating system through a network;

a display process unit which displays said input screen in which said plurality of component setting regions are formed on a display unit to input said plurality of parameters for

forming said plurality of components suitable for said plurality of research items on said work screen on the basis of said screen information;

a managing unit which manages information which is input by said user operation through said input screen as a plurality of parameters to form said work screen, and which outputs said plurality of parameters required to form said plurality of components and input in said plurality of component setting regions corresponding to said plurality of research items formed in said input screen in association with respective type information which specifies said corresponding type of said plurality of said components when said producing button operation is accepted; and

a transmitting unit which outputs the parameter managed by said managing unit to said accepting unit of said program creating system that creates said program through said network.

33. (Currently Amended) A program creating ~~module-unit~~ for creating a research program which performs a research on the basis of a predetermined research content including a plurality of research items at a predetermined point of research by using a mobile terminal device carried with a researcher,

said mobile terminal device including a display unit for displaying a work screen in which a plurality of input interfaces are formed to input an answer to said plurality of research items of said predetermined research content when executing said research program, a position information acquiring unit for acquiring a position information of said device, and a photographing unit for photographing a designated object, said program creating program being executed by a processor of a computer comprising:

a screen information storing unit which holds screen information that forms an input screen including a component setting region to accept information as a parameter required to create said research program to form a component for forming a plurality of research item designating regions to display information representing said plurality of research items of said predetermined research content, and a research result input region in which said plurality of input interfaces are formed to input an answer to said plurality of research items, or a component for designating that said position information acquiring unit or said ~~photograph-photographing~~ unit of said mobile terminal device is used, said information being input by a user, a component adding operation button group to accept an instruction to add said component of a type selected from a plurality of types of said component by allowing said user to select a type suitable for said

research item added to said work screen, said component adding operation button group being used in the case of adding said research item to said work screen, and a producing button to instruct that a source code is produced by using information required to form said components depending on said type which is input by said user operation, said plurality of research item designating regions and said research result input region being displayed on said work screen displayed on said display unit of said mobile terminal device when said mobile terminal device executes said research program, and which produces information to form said input screen in which each of said component setting region is formed to accept information as said parameter required to form said component depending on said selected type, said information being input by said user, every time said component adding operation button group is operated, the parameter representing a question to be displayed on a display of a predetermined terminal device when the first program is executed; and

a model storing unit which holds a program code for forming said respective components as a plural types of models using said parameter as an argument in association with said type information which specifies said type of said component,

said program creating ~~module-unit~~ causing a computer to realize:

a providing unit which provides said screen information to a setting apparatus connected through a network;

an accepting unit which accepts the parameter input on the input screen displayed on the basis of said screen information from said setting apparatus through said network;

a producing unit which produces a source code of said research program by selecting a plurality of models from said model storing unit for forming respective components corresponding to said type information of said plurality of components to combine said models and setting said parameter in said argument of said model on the basis of respective type information of said plurality of components corresponding to said plurality of research items included in said plurality of parameters accepted by said accepting unit, and upon completion of production of the said source code, which outputs the effect as a source code completion notification;

a compiling unit which compiles said source code of said research program produced by said producing unit to create said research program that can be executed by said mobile terminal device; and

an instructing unit which instructs said compiling unit to compile said source code in response to said source code completion notification which is output from said producing unit, the program further causing a computer for realizing said setting apparatus of the program creating system as set forth in claim 1 to realize:

an acquiring unit which acquires said screen information from said providing unit of said program creating system through a network;

a display process unit which displays said input screen in which said plurality of component setting regions are formed on a display unit to input said plurality of parameters for forming said plurality of components suitable for said plurality of research items on said work screen on the basis of said screen information;

a managing unit which manages information which is input by said user operation through said input screen as a plurality of parameters to form said work screen, and which outputs said plurality of parameters required to form said plurality of components and input in said plurality of component setting regions corresponding to said plurality of research items formed in said input screen in association with respective type information which specifies said corresponding type of said plurality of said components when said producing button operation is accepted; and

a transmitting unit which outputs the parameter managed by said managing unit to said accepting unit of said program creating system that creates said program through said network.